

WHAT IS CLAIMED IS:

1. A method of altering remodeling of chromatin in a cell comprising administering to the cell a compound that modulates an interaction of a subunit of a chromatin remodeling complex and a domain within a protein.
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2. The method of claim 1 wherein the compound modulates the interaction by inhibiting or enhancing the subunit of the chromatin remodeling complex and the domain within the protein.
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3. The method of claim 1 wherein the protein is a transcription factor.
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4. The method of claim 3 wherein the domain is a nucleic acid binding domain or an activation domain.
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5. The method of claim 3 wherein the nucleic acid binding domain is a zinc-finger binding domain.
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6. The method of claim 5 wherein the zinc-finger domain is a peptide.
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7. The method of claim 6 wherein the nucleic acid binding domain is an artificial zinc-finger domain.
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8. The method of claim 6 wherein the peptide is linked to a second peptide to form a fusion protein.
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9. The method of claim 4 wherein the nucleic acid is DNA
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10. The method of claim 4 wherein the nucleic acid is RNA.
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11. The method of claim 1 wherein the chromatin remodeling complex is SWI/SNF, RSC, NURF, CHRAC, ACF, NURD and RSF.

12. The method of claim 1 wherein the chromatin remodeling complex is SWI/SNF.

13. The method of claim 12 wherein the SWI/SNF is a human SWI/SNF.

14. The method of claim 1 wherein the chromatin remodeling complex is tissue-specific.

10 15. The method of claim 12 wherein the SWI/SNF subunit is BRG1, BRM, BAF 155, BAF 170, INi1, BAF 60, BAF 47, or BAF 57.

16. The method of claim 1 wherein the compound inhibits the interaction of the chromatin remodeling complex subunit and the domain within the protein.

17. The method of claim 1 wherein the compound enhances the interaction of the chromatin remodeling complex subunit and the domain within the protein.

20 18. The method of claim 1 wherein the subunit is associated with at least one other subunit.

19. The method of claim 12 wherein the SWI/SNF complex is E-RC1.

25 20. The method of claim 5 wherein the zinc finger DNA-binding domain is GATA-1 (erythroid), Sp1 (ubiquitous), EKLF (erythroid), FKLF (fetal), BKLF (basic), GKLF (gut), or LKLF (lung); Wilm's tumor suppressor protein (WT1); BRCA1 or BRCA2; KRAB; a BTB/POZ domain-containing zinc-finger protein; or a zinc finger-containing nuclear hormone receptors.

30 21. The method of claim 5 wherein the zinc finger DNA-binding domain is from a regulator of tissue-specific nucleic acid expression.

22. The method of claim 21 wherein the zinc finger DNA-binding domain is GATA-1, EKLF, or FKLF.

5 23. The method of claim 20 wherein the BTB/POZ domain-containing zinc-finger protein is PLZF (promyelocytic leukemia zinc finger).

24. The method of claim 20 wherein the zinc finger-containing nuclear hormone receptors is an androgen, estrogen, thyroid, progesterone, or 10 glucocorticoid receptors.

25. The method of claim 1 wherein the subunit of a chromatin remodeling complex is from a plant or animal.

15 26. The method of claim 25 wherein the animal is a mammal.

27. The method of claim 26 wherein the mammal is a human.

28. A method of altering activation of transcription in a cell comprising 20 administering to the cell a compound that modulates the interaction of a subunit of a chromatin remodeling complex and a domain within a protein.

29. A method of screening for modulating compounds comprising contacting a subunit of a chromatin remodeling complex and a domain 25 within a protein with the modulating compound in the presence of chromatin, and comparing the level of chromatin remodeling or transcription activation in the presence and absence of the compound.

30. An *in vitro* system to increase or decrease transcription comprising 30 a subunit of a chromatin remodeling complex and a domain within a protein.

31. A pharmaceutical agent for gene therapy comprising a compound that modulates the interaction of a subunit of a chromatin remodeling

complex and a domain within a protein, and a pharmaceutically effective carrier.

32. The pharmaceutical agent of claim 30 wherein the compound
5 modulates the interaction by either inhibiting or enhancing the interaction
of the subunit of the chromatin remodeling complex and the domain within
the protein.

33. The pharmaceutical agent of claim 31 wherein the compound
10 interacts with the subunit of the chromatin remodeling complex.

34. The pharmaceutical agent of claim 31 wherein the compound
interacts with the domain within the protein.

15 35. A method of altering remodeling of chromatin in a cell comprising
administering to the cell a compound that modulates the interaction of a
subunit of a chromatin remodeling complex or a domain within a protein
with nucleic acid.

20 36. The method of claim 35 wherein the nucleic acid is a regulatory
region.

37. The method of claim 36 wherein the regulatory region is a promoter,
enhancer, insulator, silencer, or locus control regions [LCRs].

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